

**A COMPLETE LIST OF INVASIVE ALIEN  
LONGHORNED BEETLES SPECIES FOR TURKEY  
(COLEOPTERA: CERAMBYCIDAE)**

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**[Özdikmen, H. 2017. A complete list of invasive alien longhorned beetles species for Turkey (Coleoptera: Cerambycidae). Munis Entomology & Zoology, 12 (2): 508-515]**

**ABSTRACT:** A total of 9 alien longhorn beetle species have established in Turkey. The species belong to the subfamilies Cerambycinae and Lamiinae which are prevalent in the native fauna as well. The alien species mainly established during the period 1960-2016, arriving from Asia (5 species), Africa (2 species) and Australia (2 species). Turkey are by far the most invaded countries. All species have been introduced accidentally. Wood-derived products such as wood-packaging material and palettes and plants for planting constitute invasive pathways of increasing importance. However, only few species have yet colonized natural habitats outside parks and gardens. Keys for adults of the species of the genera *Anoplophora* and *Phoracantha* that are represented with more than one species in Turkey are also proposed.

**KEY WORDS:** Cerambycidae, Cerambycinae, Lamiinae, invasive alien species, Turkey

International trade is increasing rapidly with developing transportation routes. As a result of this, it became easier for many animal species to move from their natural habitats with the breakdown of the natural barriers between countries and continents (Lowe et al., 2000). The exponential growth in the volume of international trade in both horticulture and forestry has allowed an increasing number of wood products and ornamental plants potentially containing cerambycids to arrive in Turkey. Many species have been introduced to Turkey or moved within Turkey but most of them never established. I have determined 9 species alien to Turkey that have established in Turkey.

In this research a complete list of invasive alien longhorned beetles in Turkey is presented.

**MATERIAL AND METHODS**

The material of this work is published works by various authors. During this study, no collected specimens from any locations has been used. Firstly, I examined the available references and I determined alien cerambycids species living in Turkey. For detecting these species I benefited from many references. After this I obtained information about their distribution in Turkey and around the world from Löbl & Smetana (2010) and Danilevsky (2016) chiefly. Finally, I prepared the sections for each species with a map that shows the provincial distribution in Turkey. I used ArcView GIS version 3.1 for Windows for these maps. The type information for each species is arranged according to Tavakilian (2016). 9 species alien to Turkey are listed in appendix.

Abbreviations: **Orig. comb.:** Original combination; **Type inf.:** Type information; **Syn.:** Synonyms; **Rang.:** Range and **Rep. fr. Turkey:** Report from Turkey.

## RESULTS

## Subfamily Cerambycinae Latreille, 1802

## Tribe Phoracanthini Newman, 1840

Genus *Phoracantha* Newman, 1840: 19(type species *Stenocorus semipunctatus* Fabricius, 1775)A key for the species of *Phoracantha* in Turkey

1. Elytra mostly cream to yellowish in colour with dark brown areas primarily limited to the posterior end; long, dense golden hairs can be found on the underside of each antennal segment; antennal spines less prominent of males.....

.....*P. recurva*

-. Elytra mostly dark brown with a zigzag line bisecting the cream-coloured area in the middle; antennal hairs either absent or sparse; antennal spines more prominent of males.....*P. semipunctata*

***Phoracantha recurva* Newman, 1840**

(Fig. 1A)

**Orig. comb.:** *Phoracantha recurva* Newman, 1840: 4. **Type inf.:** Holotype, ex collection Newman, The Natural History Museum, London [type locality "New Holand" (Australia)]. **Syn.:** *Phoracantha recurva papua* Gressitt, 1959: 93 [Papua New Guinea: Port Moresby]. **Rang.:** **Europe:** Greece, Italy, Malta, Portugal, Spain **North Africa:** Libya, Morocco, Tunisia **Asia:** Israel, Lebanon, Turkey **Afrotropical region** (Malawi, Mozambique, Réunion, South Africa, Zambia), **Australian region** (Australia, New Zealand, Papua New Guinea), **Nearctic region** (USA), **Neotropical region** (Argentina, Brazil, Chile, Paraguay, Uruguay). **Rep. fr. Turkey:** This species has been detected only by Özdikmen & Çağlar (2004) from Karaduvar district (İçel province) in 23 July 2002 on *Eucalyptus camaldulensis* Dehnhardt, 1832 (Myrtaceae) until now.

***Phoracantha semipunctata* (Fabricius, 1775)**

(Fig. 1B)

**Orig. comb.:** *Stenocorus semipunctata* Fabricius, 1775: 180. **Type inf.:** Syntypes 2 ♀♀, ex collection Banks, The Natural History Museum, London [type locality "Nova Hollandia" (Australia)]. **Syn.:** *Phoracantha inscripta* Germar, 1848: 226 [Australia: Adelaide]; *Phoracantha hospita* Pascoe, 1864: 232 [Australia: Queensland]. **Rang.:** **Europe:** France, Greece, Italy, Malta, Portugal, Spain **North Africa:** Algeria, Canary Islands, Egypt, Libya, Morocco, Madeira Archipelago, Tunisia **Asia:** Cyprus, Georgia, Israel, Jordan, Lebanon, Syria, Turkey **Afrotropical region** (Mauritius, Mozambique, Namibia, Rodriguez, South Africa, Zambia, Zimbabwe), **Australian region** (Australia, New Zealand, Papua New Guinea), **Nearctic region** (USA, Mexico), **Neotropical region** (Argentina, Bolivia, Brazil, Chile, Ecuador, Peru, Uruguay). **Rep. fr. Turkey:** This species was firstly detected by Acatay (1960) in 1957 on trees of Tarsus-Karabucak eucalyptus forest (İçel province) in Southern Anatolia. This record was repeated by Demelt (1967), Erdem (1968) and Erdem & Canakçioğlu (1977). Sekendiz & Yıldız (1969), Yıldız et al. (1981) and Çanakçioğlu (1983) stated the species occurs also in Adana, Antalya, Hatay, Muğla and Şanlıurfa provinces. The presence of this species in Adana, Antalya, Hatay, İçel, Kilis, Muğla, Osmaniye and Şanlıurfa provinces has been reported with many records by Adlbauer (1992), Kanat (1998), Lodos (1998), Tozlu et al. (2002), Aytar et al. (2011), Özbek et al.

(2015).

**Tribe Phoracanthini Newman, 1840****Genus *Cordylomera* Audinet-Serville, 1834**(type species *Cordylomera nitipennis* Audinet-Serville, 1834 = *Cerambyx spinicornis* Fabricius, 1775)***Cordylomera spinicornis* (Fabricius, 1775)  
*Cordylomera spinicornis spinicornis* (Fabricius, 1775)**

(Fig. 1C)

**Orig. comb.:** *Cerambyx spinicornis* Fabricius, 1775: 167. **Type inf.:** Syntypes (2), ex collection Joseph Banks, The Natural History Museum, London [type locality "Sierra Leone (Africa)"]. **Syn.:** *Cerambix torridus* Olivier, 1795: 31 [Sierra Leone], *Cordylomera testacea* Buquet, 1844: 233 [Senegal], *Cordylomera suturalis* Chevrolat, 1858: 242 [Nigeria], *Cordylomera spinicornis* var. *sansibarica* Kolbe, 1893: 248 [Tanzania], *Cordylomera spinicornis* var. *angolensis* Veiga-Ferreira, 1971: 7 [Angola]. **Rang.:** **Europe introduced:** Czech Republic, Denmark, France, Germany, Ireland, Italy, Malta, Spain, Sweden and United Kingdom, **East Africa:** Tanzania, Uganda, Mozambique, **Central Africa:** Angola, Cameroon, Central African Republic, Equatorial Guinea, Gabon, Congo (Democratic Republic of the Congo, Republic of the Congo), **West Africa:** Togo, Nigeria, Ghana, Guinea, Liberia, Sierra Leone, Guinea-Bissau, Niger, Senegal, Benin. **Rep. fr. Turkey:** This species was recently detected by Özdikmen et al. (2017) as 4 ♂♂ and 6 ♀♀ in early June 2016 on exporting logs (Meliaceae: *Khaya anthotheca* (Welw.) C.DC., *Entandrophragma angolense* (Welw.) C.DC. and *Entandrophragma cylindricum* (Sprague) Sprague) from Congo in Kocaeli province of North-Western Anatolia (Turkey).

**Tribe Clytini Mulsant, 1839****Genus *Xylotrechus* Chevrolat, 1860: 456**(type species *Clytus sartorii* Chevrolat, 1860)**Subgenus *Xylotrechus* Chevrolat, 1860: 456**(type species *Clytus sartorii* Chevrolat, 1860)***Xylotrechus stebbingi* Gahan, 1906**

(Fig. 1D)

**Orig. comb.:** *Xylotrechus stebbingi* Gahan, 1906: 244. **Type inf.:** Lectotype ♂, The Natural History Museum, London [type locality "Tibet" (China)]. **Rang.:** Albania, France, Greece, Italy, Slovenia, Switzerland **North Africa:** Tunisia **Asia:** Afghanistan, Bhutan, China (Tibet), India, Israel, Nepal, Pakistan, Syria, Tajikistan, Turkey, **Oriental region. Rep. fr. Turkey:** This species has been detected only by Özdikmen & Tezcan (2011) from Bornova county (İzmir province) in 2010 on *Morus alba* Linnaeus, 1753 (Moraceae) until now.

**Subfamily Lamiinae Latreille, 1825****Tribe Phrynetini J. Thomson, 1864****Genus *Phryneta* Dejean, 1835**(type species *Lamia marmorea* Olivier, 1797)***Phryneta leprosa* (Fabricius, 1775)**

(Fig. 1E)

**Orig. comb.:** *Lamia leprosa* Fabricius, 1775: 178. **Type inf.:** ex collection Drury

[type locality “America”]. **Syn.:** *Lamia brunicornis* Guérin-Méneville, 1844: 239 [Guinea]. **Rang.:** **Europe introduced:** France, Malta and **Afrotropical region.** **Rep. fr. Turkey:** This species was recently detected by Özdikmen & Atak (2017) as 4 ♂♂ and 1 ♀ in early June 2015 on exporting Iroko timbers (Moraceae: *Milicia regia* (A. Chev.) C.C. Berg, 1982) from Cameroon and 1 ♂ in summer of 2016 on exporting Kosipo timbers (Moraceae: *Entandrophragma candollei* Harms, 1896) from Cameroon in Kocaeli province of North-Western Anatolia (Turkey).

### Tribe Monochamini Gistel, 1848

#### Genus *Anoplophora* Hope, 1839

(type species *Anoplophora stanleyana* Hope, 1839)

#### A key for the species of *Anoplophora* in Turkey

1. Base of elytra smooth.....*A. glabripennis*
- . Base of elytra with numerous tubercles.....2
2. Pronotum entirely black.....*A. chinensis*
- . Pronotum with two bluish-white hair spots on either side of the pronotal disc.....*A. malasiaca*

#### *Anoplophora chinensis* (Forster, 1771)

(Fig. 1F)

**Orig. comb.:** *Cerambyx chinensis* Forster, 1771: 39. **Type inf.:** Holotype ♀, ex collection Forster, Linnean Society of London [type locality “China”]. **Syn.:** *Cerambyx farinosa* Houttuyn, 1766: 536 [Homonym Name]; *Lamia punctator* Fabricius, 1777: 230 [China]; *Cerambyx sinensis* Gmelin, 1793: 1863 [China]; *Callophora abbreviata* J. Thomson, 1865: 553 [China: Manchuria]; *Callophora afflicta* J. Thomson, 1865: 553 [China]; *Callophora luctuosa* J. Thomson, 1865: 553 [China]; *Callophora sepulchralis* J. Thomson, 1865: 553 [China]. **Rang.:** **Europe introduced:** Austria, Croatia, Germany, Italy, Netherland, and European Turkey **Asia:** China, Indonesia, Japan, Korea, Myanmar, Philippines, Taiwan, Asian Turkey, Vietnam and **Nearctic region introduced** (USA). **Rep. fr. Turkey:** This species was firstly reported by Hızal et al. (2015) from Şile (İstanbul province) in 12 June 2014 on *Acer palmatum* Thunberg, 1775 (Sapindaceae), *A. saccharum* Marshall, 1785 (Sapindaceae) and *Salix caprea* Linnaeus, 1753 (Salicaceae). Also this species was recently detected by Özdikmen (2017b) as 3 ♂♂ and 2 ♀♀ from Zeytinburnu (İstanbul province) in 15 June 2015 and as 2 ♂♂ and 2 ♀♀ from Gölbucağı (Bartın province) in 6 July 2015 from Gölbucağı (Bartın province) of North-Western Turkey.

#### *Anoplophora glabripennis* Motschulsky, 1854

(Fig. 1G)

**Orig. comb.:** *Cerosterna glabripennis* Motschulsky, 1854: 48. **Type inf.:** Lectotype, ex collection V. I. Motschulsky, Zoological Museum, University of Moscow [type locality “N China”]. **Syn.:** *Cerosterna laevigatrix* J. Thomson, 1857: 297 [China]; *Melanauster nobilis* Ganglbauer, 1889: 82 [China]; *Melanauster angustata* Pic, 1925: 21 [China]; *Melanauster luteonotata* Pic, 1925: 21 [China]; *Melanauster nankinea* Pic, 1926: 2 [China]; *Melanauster laglaisei* Pic, 1953: 3 [China]. **Rang.:** **Europe introduced:** Austria, Czech Republic,

Finland, France, Germany, Italy, Netherland, Switzerland, European Turkey  
**Asia:** China, Indonesia, Japan, Korea, Myanmar, Philippines, Taiwan, Asian Turkey, Vietnam and **Nearctic region introduced** (USA, Canada). **Rep. fr. Turkey:** This species was reported by Ayberk et al. (2014) from Zeytinburnu (İstanbul province) in 7 July 2014 on *Acer negundo* Linnaeus, 1753 (Sapindaceae).

***Anoplophora malasiaca* (J. Thomson, 1865)**

(Fig. 1H)

**Orig. comb.:** *Callophora malasiaca* J. Thomson, 1865: 553. **Type inf.:** Lectotype ♀, ex collection J. Thomson > R. Oberthür, Muséum National d'Histoire Naturelle, Paris [type locality "Malasia" (Malaysia)]. **Syn.:** *Melanauster perroudi* Pic, 1953: 3 [Japan]. **Rang.:** **Europe introduced:** Austria, Croatia, Czech Republic, Germany, Italy, Netherland **Asia:** Japan, Korea, Asian Turkey. **Rep. fr. Turkey:** This species was recently detected by Özdikmen (2017) as 2 ♂♂ and 2 ♀♀ in early June 2015 on *Acer palmatum* Thunberg, 1775 (Sapindaceae) from Şile (İstanbul province) of North-Western Anatolia (Turkey).

**Tribe Batocerini J. Thomson, 1864**

**Genus *Batocera* Dejean, 1835: 341**

(type species *Cerambyx rubus* Linnaeus, 1758)

***Batocera rufomaculata* (DeGeer, 1775)**

***Batocera rufomaculata rufomaculata* (DeGeer, 1775)**

(Fig. 1I)

**Orig. comb.:** *Cerambyx rufomaculata* DeGeer, 1775: 107. **Type inf.:** ex collection Degeer, Naturhistoriska Riksmuseet, Stockholm [type locality "?" but very likely India]. **Syn.:** *Cerambyx cruentatus* Gmelin, 1790: 1863 [India]. **Rang.:** **Asia:** Andaman Islands, Burma, China (Hainan, Hongkong, Ksizang), India (Assam, Bihar, Jammu & Kashmir, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Punjab, Tamil Nadu, Uttar Pradesh), Nepal, Indonesia (Java, Sumatra), Asian Turkey, Iran, Iraq, Israel, Jordan, Lebanon, Syria, Egypt, Malaysia (Malaysia peninsula), the Maldives, Myanmar, Oman, Yemen, Pakistan, Sri Lanka, Tibet, Thailand and Vietnam **Africa:** Madagascar, Mauritius, Reunyo's, Rodriguez, Seychelles and Socotra **Neotropical region introduced:** Barbados and the Virgin Islands. **Rep. fr. Turkey:** This species was firstly reported by Tozlu & Özbek (2000) from Adana, Hatay, İçel and Osmaniye provinces in Southern Anatolia. Özbek & Tozlu (2002) stated the species occurs also in Antalya province. The presence of this species in Adana, Antalya, Hatay, İçel and Osmaniye provinces has been confirmed with many records by Tozlu et al. (2003), Özdikmen & Hasbenli (2004), Özdikmen & Şahin (2006), Özdikmen & Demir (2006), Özdikmen (2006), Bahadroğlu et al. (2009), Özdikmen et al. (2010), Cihan et al. (2013) until now.

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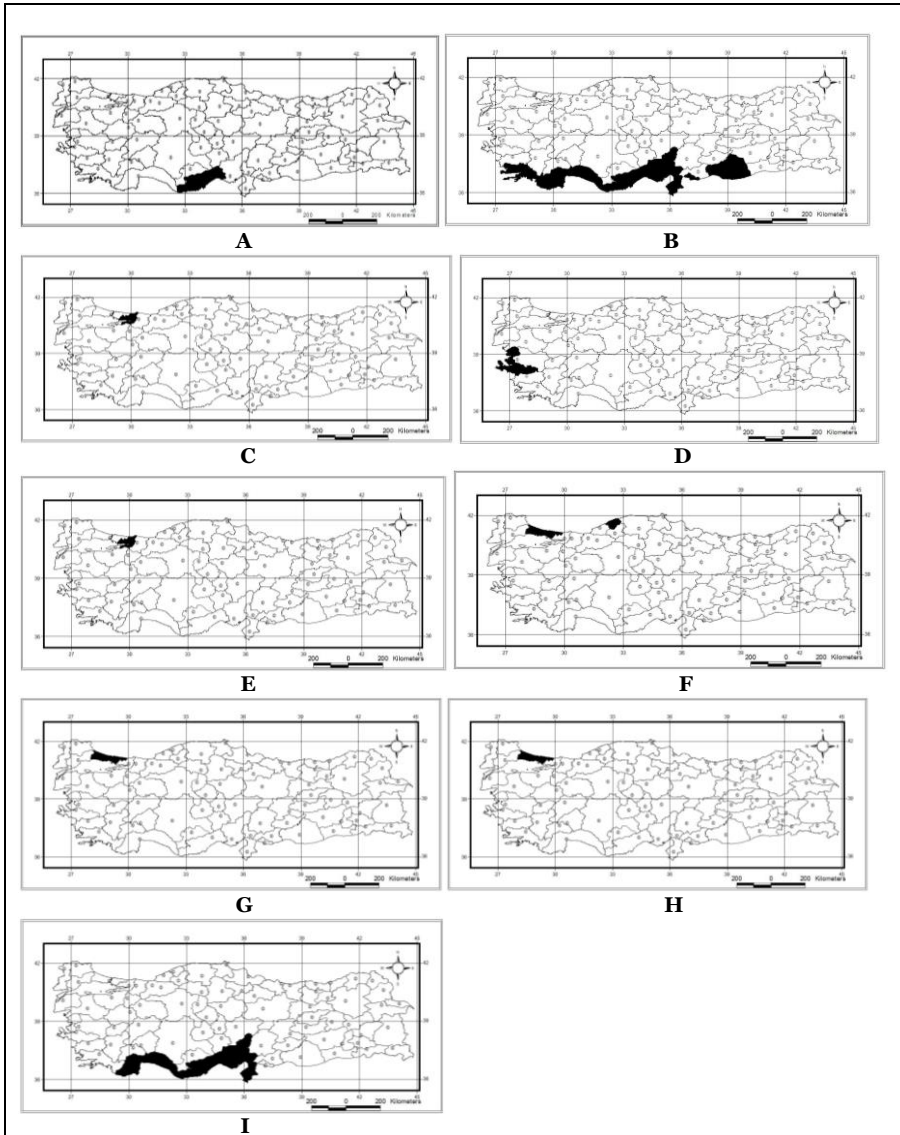


Figure 1. The distribution patterns in Turkey of A. *Phoracantha recurva* Newman, 1840, B. *Phoracantha semipunctata* (Fabricius, 1775), C. *Cordylomera spinicornis* (Fabricius, 1775), D. *Xylotrechus stebbingi* Gahan, 1906, E. *Phrynetta leprosa* (Fabricius, 1775), F. *Anoplophora chinensis* (Forster, 1771), G. *Anoplophora glabripennis* Motschulsky, 1854, H. *Anoplophora malasiaca* (J. Thomson, 1865), I. *Batocera rufomaculata* (DeGeer, 1775).

**Appendix 1.** A list of 9 species alien to Turkey.**Subfamily Cerambycinae Latreille, 1802**

Tribe Phoracanthini Newman, 1840

Genus *Phoracantha* Newman, 1840: 19*Phoracantha recurva* Newman, 1840

[İçel province]

*Phoracantha semipunctata* (Fabricius, 1775)

[Adana, Antalya, Hatay, İçel, Kilis, Muğla, Osmaniye and Şanlıurfa provinces]

Genus *Cordylomera* Audinet-Serville, 1834*Cordylomera spinicornis* (Fabricius, 1775)*Cordylomera spinicornis spinicornis* (Fabricius, 1775)

[Kocaeli province]

Tribe Clytini Mulsant, 1839

Genus *Xylotrechus* Chevrolat, 1860: 456Subgenus *Xylotrechus* Chevrolat, 1860: 456*Xylotrechus stebbingi* Gahan, 1906

[İzmir province]

**Subfamily Lamiinae Latreille, 1825**

Tribe Phrynetini J. Thomson, 1864

Genus *Phrynetia* Dejean, 1835*Phrynetia leprosa* (Fabricius, 1775)

[Kocaeli province]

Tribe Monochamini Gistel, 1848

Genus *Anoplophora* Hope, 1839*Anoplophora chinensis* (Forster, 1771)

[Bartın and İstanbul provinces]

*Anoplophora glabripennis* Motschulsky, 1854

[İstanbul province]

*Anoplophora malasiaca* (J. Thomson, 1865)

[İstanbul province]

Tribe Batocerini J. Thomson, 1864

Genus *Batocera* Dejean, 1835: 341*Batocera rufomaculata* (DeGeer, 1775)*Batocera rufomaculata rufomaculata* (DeGeer, 1775)

[Adana, Antalya, Hatay, İçel and Osmaniye provinces]